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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,662	06/26/2003	Woong Kwon Kim	041993-5221	4008

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EXAMINER	
TON, MINH TOAN T	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,662	KIM ET AL.	
	Examiner	Art Unit	
	Toan Ton	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "340" (a storage electrode) as described in the specification (of Figure 5). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "525" of Figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR

1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al (US 6559904).

Kim discloses a liquid crystal display device comprising (see at least Figures 1-5): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at

intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 2, lines 27-31).

Kim discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 1-5).

Kim discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 1-5).

Kim discloses a portion of the pixel electrode overlapping a data line having a taper shape (see at least Figures 1-5).

5. Claims 1-3, 6-9, 15-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takemura (US 5852488).

Takemura discloses a liquid crystal display device comprising (see at least Figures 4-5): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a

second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 7, lines 42-46).

Takemura discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

Takemura discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

Takemura discloses the device comprising basic elements of the TFT such as gate, source drain and semiconductor layer, and wherein the pixel electrode is connected to the source/drain electrode through a contact hole of a passivation/insulating layer (see at least Figures 4-5).

Takemura discloses the source/drain electrode protruding into the pixel area and overlapping by the pixel electrode (see at least Figures 4-5).

6. Claims 1-3, 6-10, 15-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita (US 5659375)

Yamashita (see Figures 1-4, 8-9) discloses a liquid crystal display device comprising (see Figures 1-4, 8-9): a plurality of gate lines and data lines arranged horizontally and vertically, respectively, for defining a plurality of pixel areas; a plurality of switching devices (TFTs) formed at intersections of the gate lines and the data lines; and a pixel electrode formed in a pixel area connected to the switching device corresponding to the pixel area and partially overlapping the data lines adjacent to the corresponding pixel area, wherein a first parasitic capacitance generated by the pixel electrode overlapping a data line for the corresponding pixel area and a

second parasitic capacitance generated the pixel electrode overlapping a data line for an adjacent pixel area are substantially equal to each other (see at least col. 4, lines 15-19).

Yamashita discloses a part of the data line for the corresponding pixel area protruding into the corresponding pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses a part of the data line for the adjacent pixel are protruding into the corresponding pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses the device comprising basic elements of the TFT such as gate, source drain and semiconductor layer, and wherein the pixel electrode is connected to the source/drain electrode through a contact hole of a passivation/insulating layer (see at least Figures 1-4, 8-9).

Yamashita discloses the source/drain electrode protruding into the pixel area and overlapping by the pixel electrode (see Figures 1-4, 8-9).

Yamashita discloses a storage capacitor electrode formed below the data line and extended along the data line (see Figures 1-4, 8-9).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 15, 2004

TOAN TON
PRIMARY EXAMINER